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EXAMINER

CHANG, AUDREY Y

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**BEFORE THE BOARD OF PATENT APPEALS
AND INTERFERENCES**

Application Number: 10/772,752
Filing Date: February 05, 2004
Appellant(s): WOONTNER, MARC O.

Maria M. Eliseeva
Reg. No. 43,328
For Appellant

EXAMINER'S ANSWER

MAILED
APR 13 2007
GROUP 2800

This is in response to the appeal brief filed December 22, 2006 appealing from the Office action mailed January 13, 2006.

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(1) Real Party in Interest

A statement identifying by name the real party in interest is contained in the brief.

(2) Related Appeals and Interferences

The examiner is not aware of any related appeals, interferences, or judicial proceedings which will directly affect or be directly affected by or have a bearing on the Board's decision in the pending appeal.

(3) Status of Claims

The statement of the status of claims contained in the brief is correct.

(4) Status of Amendments After Final

The appellant's statement of the status of amendments after final rejection contained in the brief is correct.

(5) Summary of Claimed Subject Matter

The summary of claimed subject matter contained in the brief is correct.

(6) Grounds of Rejection to be Reviewed on Appeal

The appellant's statement of the grounds of rejection to be reviewed on appeal is correct.

(7) Claims Appendix

The copy of the appealed claims contained in the Appendix to the brief is correct. It is noted that the appellant has also listed the withdrawn claims.

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(8) Evidence Relied Upon

5,085,514	MALLIK et al	2-1992
5,396,839	RICE	3-1995
5,834,096	WAITTS	11-1998

(9) Grounds of Rejection

The following ground(s) of rejection are applicable to the appealed claims:

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1-3, 5-6 and 11 are rejected under 35 U.S.C. 103(a) as being unpatentable over the patent issued to Rice (PN. 5,396,839).

Rice teaches a multi-layer *structure* for forming an *image*, (please see Figures 1, 7, and 14 and columns 8-9) that is comprised of *an embossed layer* (55, in Figures 8-11, 115, in Figure 16, or 146, in Figure 18) and a *printing stock*. The printing stock (22) as shown in Figures 1 and 14, comprises a *surface layer* (23) and a *stock* (22), wherein the *stock* (22) *serves as the substrate*. The structure further comprises a *plurality of pixels or panels* (51, Figure 7 or 152, Figure 19, column 14, lines 49-52) that is embossed with *different* diffraction gratings (56, the designations of “8”, “9” and “10” in Figure 7 referred to *different* embossed diffraction gratings as shown in Figures 8, 9 and 10), respectively, wherein each of the diffraction gratings is capable of diffracting and reflecting one of the primary colors, (please

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see column 8, lines 49-63). The plurality of panels is *tinted* with ink (54), wherein the ink may include one of the primary colors (please see column 7, lines 45-50).

As shown in Figure 7, **Rice** teaches the diffraction gratings embossed on the embossable layer are capable of diffracting and reflecting red, blue or green colors. By arranging the individual diffraction gratings in certain combination, Rice further teaches that additive effect can be achieved so that by arranging different combinations of the embossed diffraction gratings in a *pixel* or panel, for instance with equal sized ink dots (55) embossed to separately diffract blue and red color would reflect the color magenta, (please see column 9, lines 30-43). **Rice** also teaches that the ink (54) is applied to the printing plate (31) to create half-tone images, which become the composite image (48), where the ink may include various color such as yellow, magenta and cyan, (please see column 5, line 30-40). The ink (54) is then pressed onto surface layer (23) of the printing stock (22, Figure 1) together with the embossed layer, that is comprised of the embossed diffraction gratings, to form the plurality of pixels or panels.

This reference has met all the limitations of the claims. With regard to the feature concerning each individual panel is *holographically* and *optically variable* configured to diffract incoming light at a predetermined reflection angle, **Rice** teaches *explicitly* that the diffraction gratings are embossed by using mold and the diffraction pattern on the mold is formed by holographic method, (please see column 10, lines 21-40). This means that the diffraction gratings are *holographically* configured. The diffraction gratings are *implicitly optically variable* since a spectra of light can be produced by a diffraction grating and can be viewed at a specific range of angles, (please see column 8, lines 49-54). But this reference does not teach *explicitly* that the *individual* panel diffracts and reflects the incoming light at a different angle. However **Rice** does teach *explicitly* that according to the **diffraction theory** a diffraction grating inherently diffracts and reflects incoming light into *beams* of spectra, which means different color of light will be diffracted and observed at a *different angle range*. Rice further teaches that the angle of diffraction and reflection of the incoming light for the diffraction grating is *determined* by the grating

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structures such as the *itches* and *orientations* of the grating grooves, (please see column 8 line 59 to column 9, line 18). It would then having been obvious to one skilled in the art, if this is not already of the case for the structure of Rice, to design and make the individual panel to diffract *different* color of light and to have the diffraction angle and therefore the reflection angle *differed* from other panels for the benefit of allowing different color effect and decorative appearance be observed at different viewing angle.

With regard to claim 3, the ink dots embossed with the same diffraction grating can be grouped together as the "panel" referred in claim 3.

With regard to claim 5, one can certainly arbitrarily assign a number to different angles of diffraction for the panels.

The same reasons of rejection above are applied to claim 11.

Claim 4 is rejected under 35 U.S.C. 103(a) as being unpatentable over the patent issued to Rice as applied to claim 1 above, and further in view of patent issued to Mallik et al (PN. 5,085,514).

The multi-layer structure for forming an image taught by Rice as described for claim 1 above has met all the limitations of the claim. This reference however does not teach explicitly to include the claimed layers. Mallik et al in the same field of endeavor teaches a layer structure for making replication of embossed microstructure wherein the layer structure include a web (111, Figure 11) serves as the thermal stable layer, a strip coating (197) serves as the wear resistant layer, an embossable layer (199) with embossed microstructure, a reflective layer (201) for overlaying the embossable layer and an adhesive layer (203) which is heat activated to adhere the multi-layer structure to a substrate (205, Figure 12, please see column lines 23-40). It would then have been obvious to one skilled in the art to apply the teachings of the layer structure of Mallik et al to modify the multi-layer structure of Rice to provide

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wear-resistant protection as well as adhesive means to make the multi-layer structure with image formed easily attached to desired substrate agent.

Claim 15 is rejected under 35 U.S.C. 103(a) as being unpatentable over the patent issued to Rice (PN. 5,396,839).

Rice teaches a *multi-layer material* or *structure* for forming an *image*, (please see Figure 7, columns 8-9) that is comprised of a plurality of *ink dots* (55, Figure 7), serves as the *pixels*, each dot is being embossed with a *diffraction grating* (56) that is capable of diffracting and reflecting incoming light in a *predetermined* diffraction angle, (please see Figure 7, columns 8-9). Rice teaches that the ink dots comprise ink (54) that includes one of the primary colors, (please see column 7, lines 45-50). Rice teaches that the ink dots having the embossed diffraction grating are applied to a printing stock (22, Figures 1, and 8-10), wherein the printing stock comprises a *surface layer* (23) and a stock (22), wherein the stock (22) serves as the substrate.

Rice teaches explicitly that the diffraction gratings are embossed by using mold and the diffraction pattern on the mold is formed by *holographic* method, (please see column 10, lines 21-40). This means that the diffraction gratings are *holographically configured*. The diffraction gratings are implicitly optically variable since different diffraction effects can be viewed from different ranges of angles of viewing, (please see column 8, lines 49-54). Rice further teaches explicitly that based on the specific groove arrangement and configuration of the diffraction grating that each of the diffraction gratings (56) can be designed to diffract light in at a specific angle range, (please see column 8, lines 54-63).

With regard to the feature concerning “multi-layer holographic pixels”, it is noted that the limitation “multi-layer” limitation is not explicitly stated in the claim. It can only be examined in the broadest interpretation. Rice teaches that the diffraction gratings formed on the ink dots (55) has a multi-

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layer structure as shown in Figures 8-11. Furthermore, the ink layer (54, basis for the ink dots) is applied on the surface layer (23) which constitutes the multi-layer structure, upon the substrate (22), (please see Figures 1 and 8-11).

Claim 15 further includes a product-by-process limitation concerning the *method* of forming the “multi-layer holographic pixels”. However this limitation is not given any patentable weight for it does not differentiate the product from the prior art, (please see MPEP 2173.05(p)). Furthermore, it is not clear how does this “a multi-layer image forming material” relate to the multi-layer holographic pixels, such feature therefore cannot be examined.

Claims 1-6, and 11 are rejected under 35 U.S.C. 103(a) as being unpatentable over the patent issued to Waitts (PN. 5,834,096) in view of the patent issued to Rice.

Waitts teaches a *card* (10) serves as the *multi-layer material* that is comprised of an *embossable* layer (32, Figures 1-3) and a *base support* (26, Figures 2-3) serves as the *substrate*, (please see column 3, lines 58-62). The embossable layer has a *microtextured* surface (34, Figures 2-3 and column 3, lines 63-64), and the microtexture represents the interference fringe of *reflection hologram*, that exhibits 2D or 3D effects (please see column 3, line 65 to column 4, line 4 and column 5, lines 12-14) which therefore provides *diffraction grating pattern* (16, please see Figures 1-3, column 3, lines 26-30), in the card or the multi-layer material. Waitts teaches that the *diffraction grating pattern* (16) can provide 3D holographic indicia with different 3D effects (18, 20 and 23, Figure 1). As shown in Figure 1, the different holographic indicia (18, 20 and 23) are reproduced at *different viewing angles or positions*, it therefore implies that there are more than one different diffraction grating patterns or holograms (one for each different holographic indicia, based on fundamental theory of the hologram, also see column 3, lines 24-26 the plural form of the “holograms”) and *each* of the diffraction grating patterns reproduces the corresponding holographic indicia would diffract incoming light at a *predetermined and different*

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diffraction/reflection angles. Although this reference does not teach explicitly that the embossing layer comprises a *plurality panels*, one certainly can identify each different diffraction grating pattern for reproducing the different holographic indicia (18, 20 and 23) be contained within a different panel. The card or the multi-layer material having more than one different holographic indicia therefore implicitly comprises more than one panels, (please see column 3, lines 11-65).

Waitts further teaches that the embossable layer can be *tinted*, (please see column 5, lines 1-6). This reference however does not teach explicitly that the tint color is one of the yellow-magenta-cyan-black color. Rice in the same field of endeavor teaches printing method for making color image wherein different color pigments including yellow-magenta-cyan-black colors can be used to create different color effect., (please see column 1, lines 58-62, column 5, lines 30-40). Rice further teaches that different color ink can be applied to different ink dots (55, Figure 7) having diffraction grating (56) embossed upon. It would then have been obvious to one skilled in the art to select one of the yellow-magenta-cyan-black color as the tint color to tint different holograms or diffraction patterns (therefore different panels) for the benefit of creating the desired decorative effects.

With regard to the feature concerning the individual panels being holographically and optically variably configured, Waitts teaches that the diffraction grating pattern comprises embossed reflection holograms that reproduce *different* 3D holographic images or indicia (18 and 20) that are viewable at *different angle* and *different viewing positions*, (please see Figure 1 and column 3, lines 24-30), this means that the different holograms for reproducing the different holographic images are in different panels and are *holographically* and *optically variably* configured.

With regard to claim 4, Waitts teaches that the multi-layer material further comprises a *heated pressed plate* (38, Figure 3) serves as the *thermally stable layer*, a *scuff coat* (36) serves as the *wear resistant layer or top coat*, a *reflective layer* (30) overlaid the embossed layer (32) and *adhesive layer* (28) that serves to attach the material to a *substrate* (26, Figure 3, column 4). Although this reference does not

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identify explicitly that the adhesive is heat activated however heat activated adhesive such as epoxy resin is very well known and well used in the art such modification would have been obvious to one skilled in the art for the benefit of using common adhesive to achieve the adherence purpose with less cost and good adhesive quality.

With regard to amended claim 5, one can certainly arbitrarily assign a number to different angles of diffraction for the panels.

The same reasons for rejections are applied to claim 11.

(10) Response to Argument

I. With regard to Issue I -- 35 USC 103(a) rejections of claims 1-3, 5-6 and 11 over US Patent 5,396,839 to Rice.

A. In response to appellant's arguments concerning that the cited **Rice** reference does not teach a "*multi-layer material for forming an image on a substrate*" which therefore differs from the instant application the examiner respectfully disagrees for the reasons stated below.

Firstly, the recitation "*a multi-layer material*" has not been given patentable weight because the recitation occurs only in the **preamble**. A preamble is generally not accorded any patentable weight where it merely recites the purpose of a process or the intended use of a structure, and where the **body of the claim does not depend** on the preamble for completeness but, instead, the process steps or structural limitations are able to stand alone. See *In re Hirao*, 535 F.2d 67, 190 USPQ 15 (CCPA 1976) and *Kropa v. Robie*, 187 F.2d 150, 152, 88 USPQ 478, 481 (CCPA 1951). In this case the body of the claim only involves an *embossing layer* and a *substrate* and **does not** depend on the preamble "*a multi-layer material*" for completeness. The structural limitations of embossing layer and the substrate are able to stand alone.

Secondly, with close examination of Figures 1, 14, 16 and 18, Rice teaches explicitly that the printing stock has a surface layer (23) separable from the printing stock (22) wherein the printing stock (22) serves as the substrate. The ink layer (54) is then *applied* on the surface layer (23, please see Figure 1). The ink layer has to be different from the surface layer (23) in order for the image to be shown. As shown in Figures 8-11, the diffraction grating is then embossed on the *embossing layer* (55) or the *ink dots* formed by the *ink layer*. The composite image layer with plurality of diffraction gratings or holograms is then placed on the printing stock (22) via the surface layer (23). This indeed shows a multi-layer material with *ink layer* or the embossing layer (54 or 55) and the surface layer (23) on a substrate (22). The ink layer (54 or 55) is an embossable material as shown in Figure 8-11, which therefore constitutes a material for the multi-layer structure.

B. In response to appellant's arguments which state that the ink dots (55, Figure 8-11) of cited Rice reference does not corresponding to an embossed layer, the examiner respectfully disagrees for the reasons stated below.

Firstly, the ink dot (55) as shown in Figure 8-11 does correspond to an "embossing layer" since it is shown explicitly that a diffraction grating can be embossed on the ink layer (55), wherein the ink layer is provided by the ink layer (54) constitutes an image as shown in Figure 1. Although the ink layer is being shown as "dots" format (ink dots 55) as if they do not form a "single embossing layer" however for any printed image, the printed image dots have to be connected in order to form a *continuous* image with good resolution. The cited Rice reference discloses that a printed image of a "flower" (21, Figure 1) is intended to be produced, in order to see an image with good quality, the printed image dots have to be closely connected to essentially form an ink or image layer in order for the image to be viewed. In a different embodiment, Rice teaches that the ink (54) can also be applied on an *embossing layer* (146, Figure 18) wherein upon the embossing layer, a plurality of diffraction gratings (56, having the same

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embossing structures as shown in Figures 8-11) are embossed upon. The *tinted* embossing layer having the *diffraction gratings* (56, Figure 19) then has a plurality of pixels (152, identical to the pixels 51), serves as the panels. This shows that the ink-embossing layer can be of a *single* layer format with a plurality of panels each with diffraction grating that are holographically and optically variably configured. This means whether to have “dots” essentially forming the ink-embossing layer or a single ink-embossing layer, it will produce the same image on a printing stock.

C. In response to appellant’s argument that the references fail to show certain features of applicant’s invention, it is noted that the features upon which applicant relies (i.e. panels are embossed or dot-matrix configured to have holographic properties, page 6 paragraph 2 of the brief) are not recited in the rejected claim(s). Although the claims are interpreted in light of the specification, limitations from the specification are not read into the claims. See *In re Van Geuns*, 988 F.2d 1181, 26 USPQ2d 1057 (Fed. Cir. 1993).

D. In response to appellant’s argument that the references fail to show certain features of applicant’s invention, it is noted that the features upon which applicant relies (i.e. panels in the multi-layer material which can be used to print a holographic image on a substrate, page 6 paragraph 3 of the brief) are not recited in the rejected claim(s). Although the claims are interpreted in light of the specification, limitations from the specification are not read into the claims. See *In re Van Geuns*, 988 F.2d 1181, 26 USPQ2d 1057 (Fed. Cir. 1993). The panels cannot be used to *print* a holographic image, the specification of the instant application fails to disclose such feature also.

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E. In response to appellant's argument which state that the cited Rice reference does not teach panels on any material, the examiner respectfully disagrees, the panels or the pixels are explicitly disclosed in the ink-embossing layer (as shown in Figure 7 and Figure 19).

F. In response to appellant's argument that the references fail to show certain features of applicant's invention, it is noted that the features upon which applicant relies (i.e. Rice teaches liquid ink for printing ... does not use as an image printing source of the kind recited in claims 1 and 11, page 6 paragraph 3 of the brief) are not recited in the rejected claim(s). Although the claims are interpreted in light of the specification, limitations from the specification are not read into the claims. See *In re Van Geuns*, 988 F.2d 1181, 26 USPQ2d 1057 (Fed. Cir. 1993). The panels cannot be used to *print* a holographic image, the specification of the instant application fails to disclose such feature also. The claims fail to claim any "*solid material*" for printing.

G. In response to applicant's argument that the references fail to show certain features of applicant's invention, it is noted that the features upon which applicant relies (i.e. "embossed traditionally" for claim 2 and "panel embossed by the pixel-by-pixel method, dot-matrix" for claim 3) are not recited in the rejected claim(s). Although the claims are interpreted in light of the specification, limitations from the specification are not read into the claims. See *In re Van Geuns*, 988 F.2d 1181, 26 USPQ2d 1057 (Fed. Cir. 1993).

H. In response to appellant's arguments which state that the cited Rice reference has no discussion of each angle corresponding to a number, the examiner respectfully disagrees for the reasons stated below.

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Firstly, the claim (claim 5) completely fails to define what is considered to be the number, this number is therefore arbitrary assigned and defined. It is implicitly true that one can make the diffraction angle for the first different diffraction grating to be angle (1) and the diffraction angle for the second diffraction grating to be angle (2) and so on.

The cited Rice reference therefore has met the limitations of the claims.

II. With regard to Issue II-- 35 USC 103(a) rejections of claim 4 over US Patent 5,396,839 to Rice in view of the US Patent 5,085,514 to Mallik et al.

Appellant's arguments (page 8 paragraph 1 of the Appeal Brief) are the same as for Issue I, they therefore have been fully addressed in the paragraphs above.

III. With regard to Issue III-- 35 USC 103(a) rejections of claim 15 over US Patent 5,396,839 to Rice.

In response to appellant's arguments which state that the cited Rice reference does not teach a multi-layer pixels, the examiner respectfully disagrees for the reasons stated below.

Firstly, the claim (claim 15) fails to disclose the actual layer structure of the "multi-layer pixels" which makes the limitations concerning the term "multi-layer" not clear.

Secondly, Rice reference teaches a plurality of *ink dots*, (55, each serves as the pixel), wherein the ink dot is comprised of an *ink layer* (54) formed on a *surface layer* (23, Figure 1), i.e. an explicitly multi-layer structure. The ink layer is being embossed with a diffraction grating or hologram (56, as shown in Figures 8-11). Rice indeed teaches a plurality of *multi-layer* holographic pixels.

The Rice reference has therefore met the limitations of the claim (claim 15).

IV. With regard to Issue IV --35 USC 103(a) rejections of claims 1-6 and 11 over US Patent 5,834,096 to Waitts in view of US Patent 5,396,839 to Rice.

A. In response to appellant's arguments which state that the cited Watts reference does not teach the material as claimed in claims 1 and 11, in particularly the "the holographic image *already* formed on the card" and "has nothing to do with the multi-layer material having the structure claimed in claims 1 and 11 for forming an image", (page 9 first paragraph of the Appeal Brief) the examiner respectfully disagrees for the reasons stated below.

Firstly, Waitts teaches a *card* having a *multi-layer material* (layers 36-28 as show in Figure 2) on a *substrate* (26, support base, please see column 3, line 57 to column 4, line 24), wherein the multi-layer material comprises a *embossing layer* (32) having an *microtextured surface* (34). The microtextured surface provides *reflection hologram exhibiting 2D or 3D effects*, (please see column 3, line 64 to column 4, line 5). Watts also teaches that he embossed microtexture provides the reflection hologram *constitutes the diffraction grating pattern* (16, please see column 3, lines 24-30), that is *comprised* of the holographic indicia (18 and 20, please see column 3, lines 14-18), wherein the 3D images of the holographic images (18 and 20) are **created** by this *embossed reflection holograms*. This means the holographic images (18 and 20) are recorded in the **microtextured surface** (34) of the **embossing layer** (32, Figure 2), which are part of the multi-layer material on a substrate for forming image.

B. In response to appellant's arguments concerning the card of the cited Waitts does not shows the 3D holographic indicia form a plurality of panel, the examiner respectfully disagrees for the reasons stated below.

The plurality of panels recited in claims 1 and 11 is referred to each panel is holographically and optically variably configured to diffract the incoming light in a predetermined angle and the angle being different for each individual panel. Watts teaches that the 3D holographic indicia (18 and 20) are being

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created by embossed holograms (**plural** holograms emphasized, please see column 3, lines 24-26), and each holographic images (18 and 20) are being reproduced and viewed at different angle and position, (please see Figure 1). [The appellant has correctly identified that “an image of the kind described in Watts normally contains diffraction gratings of *different pitch and orientation* to create the expected holographic effect”, (please see page 10, second paragraph of the Appeal Brief)]. This means *each* embossed reflection holograms, for reproducing 3D holographic images 18 and 20, respectively, diffracts incoming light at a predetermined diffraction angle and being different from each other. By definition, therefore one can make the region of embossing layer having the hologram for reproducing 3D image (18) and the region of embossing layer having hologram reproducing 3D image (20) to be of different individual panels.

C. In response to appellant’s arguments which state that cited Waitts reference teaches that “hologram may be formed in a layer of embossable media ...”, “in other words, the resulting holographic image is embossed in layer 32”, (please see page 10, second paragraph of the Appeal Brief), the examiner wishes to respectfully point out that the statement is wrong. While the hologram is formed in the layer of embossable media, the “resulting holographic image” is NOT embossed in the layer (32). The holographic image is a *reproduced* image (18 and 20, being formed outside the card), from the *embossed holograms* in the *embossable* media.

The appellant has correctly identified that “an image of the kind described in Watts normally contains diffraction gratings of different pitch and orientation to create the expected holographic effect”, (please see page 10, second paragraph of the Appeal Brief).

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D. Appellant's statement "to the contrary, the embossing of the plurality of panels is not the **final** holographic image of Waitts but as claimed in claims 1 and 11", the examiner respectfully disagrees for the reasons stated below.

Firstly, the embossing of the plurality of panels cannot be the final holographic image, neither for Waitts nor for the instant application, since the what is embossed in the embossing layer is NOT a holographic image at all. No holographic image can be embossed in a embossing layer, rather is the hologram or diffraction gratings, that create the holographic images upon reconstruction, are embossed in the layer.

Secondly, it is noted that the features upon which appellant relies (i.e." final holographic image, first panel with embossing that has the same pitch and orientation or its gratings ... second panel comprises embossing of the gratings of the same second pitch and orientation, page 10 second paragraph of the Appeal Brief) are not recited in the rejected claim(s). Although the claims are interpreted in light of the specification, limitations from the specification are not read into the claims. See *In re Van Geuns*, 988 F.2d 1181, 26 USPQ2d 1057 (Fed. Cir. 1993).

Since the appellant has correctly identified that "an image of the kind described in Watts normally contains diffraction gratings of *different pitch and orientation* to create the expected holographic effect", (please see page 10, second paragraph of the Appeal Brief), it is inherently true that the regions of the embossing layer having the diffraction gratings of the same pitch and orientation is being grouped as a panel, and regions having gratings of different pitch and orientation are being identified as different panels.

E. In response to applicant's argument that the references fail to show certain features of applicant's invention, it is noted that the features upon which applicant relies (i.e. "embossed-traditionally" for claim 2 and "panel embossed by the pixel-by-pixel method, dot-matrix" for claim 3) are

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not recited in the rejected claim(s). Although the claims are interpreted in light of the specification, limitations from the specification are not read into the claims. See *In re Van Geuns*, 988 F.2d 1181, 26 USPQ2d 1057 (Fed. Cir. 1993).

F. In response to appellant's arguments which state that the cited Rice reference has no discussion of each angle corresponding to a number, the examiner respectfully disagrees for the reasons stated below.

Firstly, the claim (claim 5) completely fails to define what is considered to be the number, this number is therefore arbitrary assigned and defined. It is implicitly true that one can make the diffraction angle for the first different diffraction grating to be angle (1) and the diffraction angle for the second diffraction grating to be angle (2) and so on.

For these reasons, cited Waitts reference and Rice reference has met the limitations of claims 1-6 and 11.

V. Matters relate to Claim objections

It is noted that the objections of the claims can not be appealed.

(11) Related Proceeding(s) Appendix

No decision rendered by a court or the Board is identified by the examiner in the Related Appeals and Interferences section of this examiner's answer.

For the above reasons, it is believed that the rejections should be sustained.

Respectfully submitted,

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Audrey Chang, Ph.D.



Primary Examiner, AU 2872

Conferees:

Ricky Mack



Stephone B. Allen

